

**ABSTRACT OF THE DISCLOSURE**

An optical module having a TO-can structure is disclosed, wherein frequency characteristics have been improved in order to make high-speed transmission possible. The optical module comprising a silicon optical bench wherein a V-groove is formed, a laser diode disposed on the V-groove of the silicon optical bench, which emits light, a photo diode which receives the light and converts it into current, a stem wherein the silicon bench and the photo diode have been disposed, and a plurality of leads coupled to the stem, to provide electric signals with the laser diode and the photo diode.

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